AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Original) A plasma arc torch comprising:

an electrode;

a tip; and

a start cartridge disposed between the electrode and the tip,

wherein the start cartridge spaces the tip from the electrode such that a pilot arc is established between the electrode and the tip when the plasma arc torch is in a high frequency start mode.

2. (Original) A start cartridge for use in a high frequency start plasma arc torch, the start cartridge providing separation and electrical isolation between an electrode and a tip in the plasma arc torch.

3. (Original) A start cartridge for use in a high frequency start plasma arc torch, the start cartridge providing separation and electrical isolation between an electrode and a tip in the plasma arc torch, comprising:

a plurality of vent holes,

wherein the vent holes provide gas flow to cool the electrode.

4. (Original) The start cartridge according to Claim 3, wherein the vent holes further comprise outer vent holes and inner vent holes such that a velocity of the gas is increased as the gas flows from the outer vent holes to the inner vent holes.

5. (Original) The start cartridge according to Claim 3, wherein the vent holes are offset from a center of the start cartridge.

6. (Original) The start cartridge according to Claim 3, wherein the start cartridge further comprises a plurality of vent passages in communication with the vent holes to vent the gas from within the start cartridge.

7. (Original) The start cartridge according to Claim 3, wherein the start cartridge further comprises an internal collar to isolate a venting chamber from a plasma chamber within the plasma arc torch.

8. (Original) A set of consumables for use in a plurality of plasma arc torches, the set of consumables comprising a dielectric standoff sized such that the set of consumables are operable under both contact start and high frequency start modes of the plasma arc torches.

9. (Original) The set of consumables according to Claim 8, wherein the consumables are selected from a group consisting of an electrode, a start cartridge, a gas distributor, a tip, a spring, and a shield cup.

10. (Original) A set of consumables for use in a plurality of plasma arc torches, the set of consumables comprising:

an electrode;

a tip; and

a gas distributor disposed between the electrode and the tip,

wherein the gas distributor is sized to provide a dielectric standoff such that the set of consumables are operable under both contact start and high frequency start modes of the plasma arc torches.

11. (New) A contact start plasma arc torch modified for operation with a high frequency power supply comprising a dielectric standoff, the dielectric standoff sized such that the contact start torch is operable under high frequency.

12. (New) The contact start plasma arc torch according to Claim 11, wherein the dielectric standoff is disposed between components of a plasma arc apparatus selected from a group consisting of consumable components, a torch head, a torch handle, a torch lead, a connector, a power supply, and an adapter.

13. (New) The contact start plasma arc torch according to Claim 11, wherein the dielectric standoff is disposed within components of a plasma arc apparatus selected from a group consisting of consumable components, a torch head, a torch handle, a torch lead, a connector, a power supply, and an adapter.

14. (New) The contact start plasma arc torch according to Claim 11, wherein the dielectric standoff is disposed between the contact start plasma arc torch and an outside environment.

15. (New) A method of operating a contact start plasma arc torch modified to operate under high frequency, the method comprising the step of providing sufficient dielectric standoff such that arcing only occurs between an electrode and a tip.

16. (New) A method of operating a contact start torch modified to operate under high frequency, the method comprising the step of preventing arcing between components of the plasma arc torch except between an electrode and a tip through providing sufficient dielectric standoff.

17. (New) A method of operating a contact start plasma arc torch in a high frequency mode comprising the step of installing consumable components to provide sufficient dielectric.